

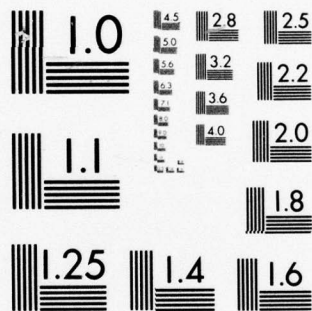
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peripherally related to the topic. Entries in each part are alphabetized according to author.

Appendix B is divided into sections treating reverse bias failure, forward bias failure, interconnection failure, and general causes of failure. Each section includes separate parts for materials directly, indirectly, or peripherally related to the topic. Entries in each part are alphabetized according to author.

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PREFACE

The following report contains a bibliographic listing of documents pertinent to the investigation of electrical overstress phenomena in semiconductor devices. The bibliography was originally compiled under the direction of Dr. G. Neudeck of Purdue University. It was provided to The BDM Corporation through the offices of Dr. D. Wunsch at the Air Force Weapons Laboratory to assist in the performance of a review of previous research in overstress effects. The bibliography has been reformatted under DNA (Defense Nuclear Agency) Contract DNA001-76-C-0191 and is published as part of the documentation for that contract. The work was sponsored by DNA under RDT&E RMSS Code B3230 76464 299QXTB097 H2590D.

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CHAPTER I

INTRODUCTION

The bibliographies presented in appendices A and B represent a collection of technical documents and articles treating subjects related to conduction processes and failure mechanisms in bipolar semiconductors exposed to high amplitude electrical transients. The sources cited in appendix A generally treat conduction processes which precede catastrophic junction damage. The sources cited in appendix B deal more directly with the failure phenomenology involved in the damage. Appendix A is divided into sections treating reverse bias processes and forward bias processes. Each of those sections is divided into parts for articles directly related to the topic, indirectly related to the topic, and peripherally related to the topic. Entries in each part are alphabetized according to author.

Appendix B is divided into sections treating reverse bias failure, forward bias failure, interconnection failure, and general causes of failure. Each section includes separate parts for materials directly, indirectly, or peripherally related to the topic. Entries in each part are alphabetized according to author.

APPENDIX A
TECHNICAL PUBLICATIONS RELATED TO
HIGH AMPLITUDE CONDUCTION
PROCESSES

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A. REVERSE BIAS PROCESSES, INCLUDING AVALANCHE, SECOND BREAKDOWN, ETC.

Part I: Articles Directly Related to Device Failure

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APPENDIX B
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RELATED TO DAMAGE MECHANISMS

A. REVERSE BIAS FAILURE - SECOND BREAKDOWN

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C. INTERCONNECTION FAILURE

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